PHYS 2109 General Physics Laboratory II Lec. 0 Lab. 3 Cr. 1

Effective Date Summer 2004-2005

Course Description

Prerequisite: A grade of "C" or better in or registration in PHYS 2102 or 2002. Laboratory course to accompany PHYS 2102 or 2002.

Course Objectives

Students will:

1. Learn to perform laboratory exercises on abstract applications of principles (including electricity, electric current and circuit, magnetism, optics, and measurement uncertainties) under ideal conditions.
2. Learn to maintain a laboratory notebook, prepare an apparatus, and make observations and recordings.
3. Learn to analyze and estimate uncertainties.
4. Use graphs as analysis tools.
5. Learn to prepare a technical document.

Procedures to Evaluate these Objectives

1. Laboratory reports
2. Cumulative final exam

Use of Results of Evaluation to Improve the Course

1. Laboratory reports will be graded and reviewed to allow concept errors to be addressed.
2. Exams will be graded and examined to determine areas of teaching which could use improvement.
3. All evaluation methods will be used to determine the efficacy of the material presentation.

Detailed Topical Outline

1. Thermal Expansion of Solids
2. Electric Field Mapping
3. Current and Ohm's Law
4. DC Circuits
5. Magnetic Field Mapping
6. Spectroscopy
7. Geometrical Optics
8. Statistics of Counting